REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 6 and 10 are currently being amended.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-26 are now pending in this application.

Claim Objections

In section 3 of the Office Action, the Examiner objected to claim 6 because of informalities. The Examiner indicated that in claim 6, line 1 "reflective layer" needs to rephrased as --the reflective layer-- to indicate that it is the same element which is recited in the base claim 1. Applicants have amended independent claim 6 to conform with the Examiner's suggestion. Accordingly, Applicants request the objection to claim 6 be withdrawn.

Claim Rejections – 35 U.S.C. § 103

In section 5 of the Office Action, the Examiner rejected claims 1, 2, 4, and 6-9 under 35 U.S.C. § 103(a) as being unpatentable over Chen (U.S. Patent No. 5,982,092) in view of Baur et al. (U.S. Patent No. 4,142,781). In the Office Action, the Examiner stated that:

> Regarding claim 1, Chen ('092) discloses a lighting system for a display (Figure 3) comprising:
>
> a light source system including a light source 40 providing light not visible to the human eyes (Figure 3, column 1, lines 10-14, and column 3, lines 43-45);

a reflective layer-combination of the fluorescent pigment layer 50 optically in contact with the reflecting layer 30- herein after referred as the reflecting layer 50, 30 (Figure 3, column 3, lines 5-7 and 11-20);

the reflective layer 50, 30 reflecting invisible light from the light source 40, and converting the invisible light into light visible to human eyes (Figure 3, column 3, lines 5-7 and 11-20);

a display layer having pixels alterable with application of electrical charge – interpreted as a liquid crystal display (LCD) (not shown, column 1, lines 17-20) well known in the art, and as evidenced by Baur et al. (U.S. Patent No. 4,142,781);

the display layer being illuminated by visible light from the reflective layer 50, 30 (not shown, column 1, lines 17-20);

the light source 40 located below the display layer – the lighting system operating as a back light source not shown, column 1, lines 17-20);

However, regarding Claim 1, Chen ('092) does not disclose a light source including a reflective layer having a phosphorescent.

On the other hand, Baur et al. ('781) discloses an electro-optical display device (Figure 9) comprising a fluorescent plate 1a, and an additional phosphorescent coating – a layer 25 containing phosphorescent particles – (Figure 9, column 9, lines 5-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the lighting system of Chen ('092) by providing the phosphorescent coating as taught by Baur et al. ('781) for the benefits and advantages of amplifying the brightness of the display device, and for providing afterglow of the display after the device is switched-off.

Independent claim 1 recites a "lighting system for a display" that includes, among other limitations, "a reflective layer having phosphorescent coatings in a substrate, the phosphorescent coated surface reflecting the invisible light from the light source and converting the invisible light into visible light visible to the human eye." Thus, claim 1 requires the presence of a reflective layer having a phosphorescent surface that "(1) reflects the invisible light and

(2) converts the invisible light into visible light." None of the cited references teaches or suggests such a layer.

For example, Chen relates to a "light emitting diode planar light source" that includes a "light conductive plate 10," "luminescent crystals 40", a "light reflection layer 30" and a separate "fluorescent pigment layer 50" (Chen, col. 3, lines 9-21). In the event that the "luminescent crystals 40" emit ultraviolet rays, a separate "filter layer 60 must be applied on the light conductive plate 10 for filtering away the ultraviolet rays and allowing the visible light to pass" (Chen, col. 3, lines 32-39). Thus, there is no teaching or suggestion that the "fluorescent pigment layer 50" is a "coating." In contrast, Chen states that the "fluorescent pigment layer 50 is interposed between the light conductive plate 10 and the light reflection layer 30" (col. 2, lines 67 – col. 3, line 1).

Further, in the Office Action, the Examiner has stated that "Chen ('092) does not disclose a light source including a reflective layer having a phosphorescent." Office Action dated 9/22/2004, p. 4. Accordingly, the Examiner has relied on Baur et al. to show a reflective layer having a phosphorescent coating on a substrate. The Examiner directs Applicants' attention to Figure 9 and column 9, lines 5-10. Applicants have reviewed the disclosure of Baur et al. and disagree with the Examiner's characterization of the cited passage and figure. The electro-optical display device of Figure 9 of Baur et al. includes a fluorescent plate 1A. Fluorescent plate 1A is not a reflective layer. Fluorescent plate 1A allows light to pass through the layer as well as containing fluorescent particles. Thus, although there are fluorescent particles in fluorescent plate 1A, the plate 1A is not a reflective layer. Regarding layer 25, which also contains fluorescent particles, layer 25 also allows light to pass through. For example, "[t]he portion of the excitation light striking from the front of the display and not absorbed by the fluorescent plate 1A and the portion of the excitation light striking from the rear and not absorbed by the high pass filter or the supplemental fluorescent plate 21 are absorbed in the phosphorescent layer 25 to cause emission of phosphorous in light 18 which can additionally excite the fluorescent plate 1A." (Col. 9, lines 12-19). Accordingly, what is described by Baur et al. is a layer or plate 25 in

which there is a phosphorescent coating but the light is also allowed to pass through the layer. Further, what is described in Baur et al. as plate 1A is also a layer in which light is allowed to pass through the layer and also includes fluorescent particles. Although both of these layers include fluorescent or phosphorescent particles, neither of these layers is a reflective layer as claimed by Applicants. Accordingly, Applicants respectfully submit that all of the claim limitations are not taught or suggested by either of Chen or Baur et al.. Applicants respectfully submit that independent claim 1 and its dependent claims are therefore allowable.

In section 7 of the Office Action, the Examiner rejected claims 10-16 under 35 U.S.C. § 103(a) as being unpatentable over Chen (U.S. Patent No. 5,982,092) in view of Vossler (U.S. Patent No. 5,856,819). Applicants submit that they are confused by the rejection in that the rejection is made over Chen in view of Vossler. However, in the discussion of claim 10, the Examiner cites Baur et al. Accordingly, Applicants request that the Examiner clarify the rejection.

However, even if the rejection was made over Chen in view of both Baur et al. and Vossler, Applicants respectfully submit that not all of the claim limitations are taught by any proper combination of the references. In particular, the step of "reflecting the infrared light from the light source by the reflective layer" and "converting the infrared light into visible light visible to the human eye by the reflective layer" is not taught or suggested by any of Chen, Vossler, or Baur et al., alone, or in any proper combination. The Examiner has cited the reflective layer 50, 30 of Chen being a reflective layer as recited by Applicants. Applicants however disagree. Chen discloses a "separate fluorescent pigment layer 50" that "converts wavelength of incident exciting light emitted by the luminescent crystal" (Chen, col. 3, lines 2-3). The light passing through the "fluorescent pigment layer 50" of Chen is then reflected by the "light reflection layer 30." Thus, there is no teaching or suggestion in Chen to provide a reflective layer that both reflects the infrared light and converts the infrared light into visible light. The "fluorescent pigment layer 50" of Chen acts as a transmissive layer rather than a reflective layer. Further, the "fluorescent pigment layer 50" is a separate layer, as opposed to a "surface" of the "light

reflection layer 30." Accordingly, Applicants respectfully submit that the "fluorescent pigment layer 50" is not a "reflective layer including at least one of a phosphorescent and a fluorescent surface" that both reflects the infrared light from the light source and converts the infrared light into visible light. Thus, the reflective layer is not taught or suggested by any combination of Chen, Baur et al., and Vossler. Applicants respectfully submit that independent claim 10 and its respective dependent claims are allowable.

In section 8 of the Office Action, the Examiner rejected claims 17-27 under 35 U.S.C. § 103(a) as being unpatentable over Inoue et al. (U.S. Patent No. 5,677,702). Inoue et al. discloses a display device which has a light guide which directs light onto a surface painted with phosphorescent materials. The surface 3A converts the UV light into visible light and displays an image that was painted onto the layer 3. Recited in Applicants' independent claim 17 is "a flexible display layer receiving and transmitting the visible light." The flexible display layer may be any of a variety of display layers which provides images based on electronic input. These types of flexible displays may be e-paper displays or the like which block some of the light being provided to the display and transmits some of the light being provided to the display. The layer 3 of Inoue et al. does not receive and transmit visible light. The layer 3 of Inoue et al. emits visible light as it is converted from UV light and provides the visible light through the light guide 1. The layer 3 of Inoue et al. does not receive visible light as in Applicants' invention in which the light is converted by one layer and partially received by and transmitted through a display layer. Thus, the display layer of claim 17 both receives and transmits visible light. The layer 3 of Inoue et al. does not both receive and transmit visible light but rather converts visible light from UV light and emits visible light. Accordingly, Applicants respectfully submit that all of the claim limitations are not taught or suggested by Inoue et al. because all of the claim limitations are not taught or suggested by Inoue et al. Accordingly, Applicants respectfully submit that independent claim 17 and its respective dependent claims are therefore allowable.

In section 9 of the Office Action, the Examiner rejected Claims 22 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Inoue et al. in view of Hajto (U.S. Patent Application

Publication No. US 2004/0100432). Applicants respectfully submit that neither of Inoue et al. nor Hajto discloses, teaches, or suggests, alone or in any proper combination, "a flexible display layer receiving and transmitting the visible light," as Applicants have claimed in independent claim 17. Accordingly, claims 22 and 26 which depend from claim 17 are allowable.

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Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorize payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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